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VOL. II.—6TH YEAR—NO. 22. SYDNEY: SATURDAY, NOVEMBER 29, 1919. PRICE 6D.

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THE MEDICAL JOURNAL OF AUSTRALIA.

VOL. II.—6TH YEAR. SYDNEY: SATURDAY, NOVEMBER 29, 1919. No. 22.

A RATIONAL ASPECT OF CARDIAC AFFECTIONS.

By **Sydney Pern, M.R.C.S., L.R.C.P. (Eng.),**
Acting Physician to Out-Patients, Melbourne Hospital.

Excluding such heart conditions as those produced by physical over-strain, congenital abnormalities, high blood-pressure causes and nervous manifestations, the majority necessitating treatment are due either to toxic spoiling of the myocardium or to direct lesions by micro-organisms involving the myocardium, valves or coronary vessels. In the case of bacterial invasion, this may take place at one period and not recur, as is possible during an attack of measles or scarlet fever, or it may be spread over many years or, again, there may be several exacerbations, as is often the case in recurrent rheumatic fever. Except in very virulent infections, its beginning is rarely detected, as there are seldom any symptoms which point to early involvement and it is only when gross changes are established that symptoms necessitating treatment call attention to the condition, or they are found accidently. Every practitioner must have come across cases of organic murmurs when making a routine examination, these murmurs often being unknown of by the patient, who has no knowledge of when they arose. When finding organic murmurs in a sick child, one is faced with the question: Is this a fresh lesion or is it an old one? Must this child be kept at rest for at least a month or may he get up in a day or two? There are really no reliable signs by which this question can be answered, unless one has recently examined the child and found no murmurs present.

The origin of these cardiac lesions can roughly be divided into three periods: early, middle and late. Tonsillar infections are usually responsible for the early period and may do their damage during an attack of tonsillitis or associated with rheumatic fever, scarlet fever, measles, diphtheria, etc., in which conditions the tonsils are usually infected.

In such conditions as in the foregoing if no further tonsillar infection takes place, a valvular lesion may be established, good compensation developed and the individual know nothing and suffer nothing from his heart condition, till told so, may be years later. Middle ear and mastoid disease and post-nasal growths are also responsible for cardiac lesions in the young.

In middle life infected tonsils still obtain, but infection of antra, nasal accessory sinuses, pyorrhœa and syphilis are to be reckoned with. Whereas in the early types the condition of cardiac involvement is prone to take place at one stated period, at this stage there is more of a tendency for the infection to be spread over a longer period of time or subject to exacerbations, except in such conditions as typhoid, pneumonia and gonorrhœa which must be included here.

In the third or late period we have the heart of the old folk. How few of them are free from organic murmurs or myocardial degeneration, although many of them may not have any symptoms except those one is apt to attribute to their years!

The prevailing source of infection here is pyorrhœa, which is almost the common lot of declining years.

Infection of this nature is, as a rule, slow and insidious, but, added to the chronic toxæmia induced by pyorrhœa, there is a steady invasion of myocardium, valves and vessels by bacteria. This produces a progressive type of injury extending over a period of years. In the early and middle types the infection may be, and often is, virulent, but in these later types it is usually of low virulence. Virulence of an organism is a most uncertain quality, as is well recognized by bacteriologists. A malignant endocarditis due to *Streptococcus viridans* may develope in one case, whilst in another the same organism can produce a lesion causing no disability and may be accidently discovered many years later.

Transmutability within the strepto-pneumococcic group has been established, each phase with its different degrees of virulence. Another factor of importance is that one individual may have a greater immunity against a certain organism than another. So the three factors, uncertainty of virulence, different phases of transmutability of the organism and varying powers of resistance must necessarily produce a multitude of clinical pictures. It has long been recognized that the myocardium is subject to degenerative changes. Streptococcic emboli of low virulence in the heart walls set up proliferative interstitial changes, such will act as points of irritation. Areas deprived of their blood supply by septic emboli or *endarteritis obliterans* may also act as points of irritation; these points are the most probable origin of extra-systoles. Auricular fibrillation and flutter possibly owe their cause to the same factor, as they are certainly not of nervous origin.

If an obliterated vessel should deprive a portion of the bundle of His of its blood supply or a gummatous growth involve it, the conducting mechanism will be destroyed and heart block result. Cardiac changes in goître are due to more than excessive thyroid output. The toxæmia and bacterial invasion from the focus which induced the goître must be taken into serious consideration, likewise the increased sympathetic activity and diminution of calcium in the tissues. The latter point is not yet proved in the laboratory, but has much backing from clinical experience. If the foregoing is true, and there is much evidence to show it is so, it behoves us to reconstruct our lines of treatment in heart lesions, which at present consists largely of rest, graduated exercises and digitalis, and to turn our attention to the prevention of the progress of the disease when once it is established and prevent its occurrence when we see it might possibly develope. Experience has shown that if supplies of bacteria can be cut off (by removal of the primary focus), the tissues are capable of dealing with those already in them, as long as the defensive

mechanism has not broken down. Much good can be expected of eradicating focal infections. Vaccines are used largely for joint and other affections often with good results.

Sir Almroth Wright says that as long as there are immunity mechanism reserves available, vaccines do good, as they mobilize these reserves. The same organism which damages joints also damages myocardia and valves. Is it not logical, then, to expect some good of vaccines in these cases also and for the matter of that in other organs such as kidney, pancreas, chronic duodenal and gastric ulcer, etc.? There is every reason to believe they are all liable to invasion from focal infections. All cases presenting focal infections are capable of developing cardiac lesions. It is on such lines that we shall be largely able to prevent, and if we cannot prevent, to check the progress of and improve the big majority of heart affections.

THE LEUCOCYTES IN TRENCH FEVER AND ALLIED OBSCURE PYREXIAS.

By **William Keith Inglis, M.D., Ch.M. (Sydney),**
Demonstrator in Pathology, Sydney University.

(*Continued from page 435.*)

Tables III. and IV.

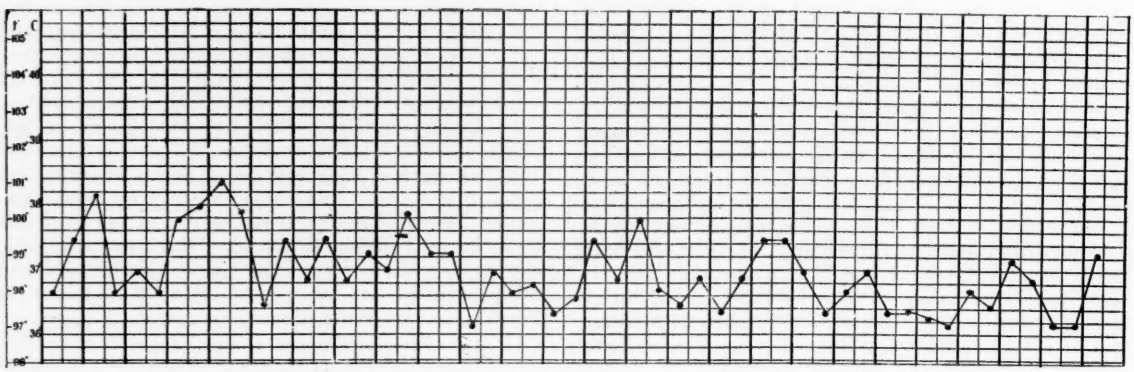
Patient No. 12 seems definitely to have had bronchitis, but the headache and the shin and muscle pains and tenderness were so marked that it seems highly probable that he had trench fever as well.

The temperature chart of Case 16 is suggestive of paratyphoid fever, and yet the clinical manifestations pointed to a diagnosis of trench fever.

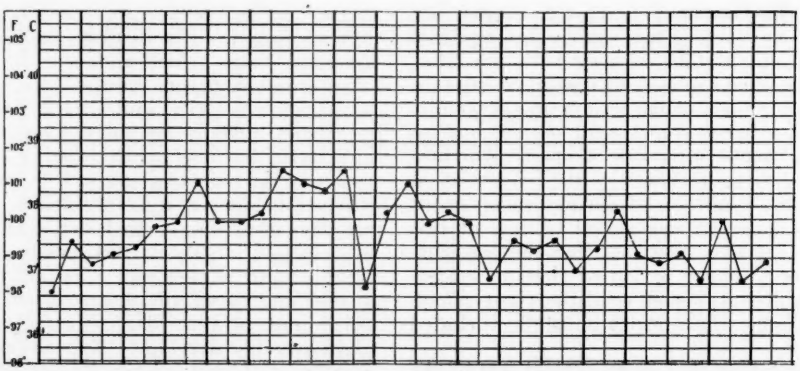
There is a suspicion of periodicity in the chart of Case 18. Regarding the interval as one of four days, the third and sixth relapses have each occurred a day before due.

In Cases 15, 17 and 18 the polymorpho-nuclear leucocytes were below the normal number; otherwise, both these cells and the lymphocytes were above normal in every case.

Case 13 is rather conspicuous in this table, for the increase of leucocytes is mainly due to the polymorpho-nuclear cells, which make up 70.5% of the total.



Case XI.



Case XVI.

Table III.

Case Number.	Date of Admission to 3rd Australian General Hospital.	Age in Years.	Nationality.	Onset.	Abdomen.	Head, Back and Limbs.	Laboratory Tests.	General.
9.	July 19, 1918	19	———	Present illness commenced with shivering, sweating, pyrexia, headache and pains all over.	Generalized tenderness, spleen not palpable.	Headache, face flushed, pains in knees, shins tender.	———	Has been ill off and on for three months. Was evacuated to Convalescent Camp on June 3, 1918, diagnosed influenza. Present illness commenced there.
10.	Jan. 6, 1918	32	Englishman	Pain in legs. Sudden onset while returning from work three weeks ago.	Spleen not palpable.	Pains in legs at night, not troublesome in day. Calf and thigh muscles tender. Shins very tender.	———	Has not been in tropics. Skin over tibiæ seemed slightly hyperalgesic.
11.	Nov. 22, 1917	22	Australian	Pains in head, neck, back and slightly in thighs two days. Shivers at onset.	Soft.	Muscles of neck, lumbar region and thighs tender. Shins not affected. Sleeps badly on account of pains.	Urine acid, no albumin, no sugar.	Was in Egypt five months.
12.	July 21, 1918	36	Englishman	Onset July 18, 1918. Pains all over, especially left side of chest, with some dyspnœa and cough.	Slightly tender (apparently muscles of abdominal wall), spleen not palpable.	Headache severe, shin pains marked, especially at night. Shins and muscles of legs and thighs definitely tender.	———	July 28, 1918, rhonchi all over chest.
13.	Nov. 24, 1917	—	Australian	Headache and pains in small of back, two days.	Nil abnormal.	Muscles of limbs unaffected, only muscles of back. They do not cause pain when still, only on movement. Lumbar muscles tender.	Urine, no albumin.	———
14.	Nov. 24, 1917	—	Australian	Pains in legs nine days. Vomiting last night.	———	Considerable tenderness of calf and thigh muscles. Shins excessively tender. Cannot sleep at night. Occasional twinges in muscles of upper extremities and small of back.	———	Temperature normal throughout stay in hospital (six days).
15.	Nov. 22, 1917	—	Australian	Pains in shins and head, four days.	Soft. Nil abnormal.	No pain or tenderness of muscles at any time. Shins the only part complained of. They ache and burn continuously, especially at night. Shins slightly tender. No objective signs.	Fæces: no parasites or ova (one examination).	Extremely constipated since being in bed.

(Continued on next page.)

Table III.—*Continued.*

Case Number.	Date of Admission to 3rd Australian General Hospital.	Age in Years.	Nationality.	Onset.	Abdomen.	Head, Back and Limbs.	Laboratory Tests.	General.
16.	Nov. 21, 1917	37	Australian	General pains and aches, two days.	Soft, slightly distended on 30th, spleen not palpable at any time.	Pains in legs from knees down, both bones and muscles. Occasionally has similar pains in elbows and thighs. No tenderness of muscles or bones, except along inner edge of lower half of each tibia.	Fæces: no organisms of enteric group.	Flushed face, heavy eyelids. Pains markedly relieved by aspirin.
17.	Sept. 22, 1917	—	Australian	———	Nil abnormal. Spleen not palpable.	Headache and giddiness. Aches in hips and legs. Legs not tender; they merely ache.	———	———
18.	Nov. 21, 1917	—	Australian	"Pains all over and cold sweats while on the march yesterday."	Soft, slightly tender in lower half.	Has aches all over, worse during pyrexia, when pain interferes with sleep. No tenderness whatever of muscles or bones.	———	Has had a cold for about two months. Was four months in Egypt.
19.	Aug. 29, 1917	—	British West Indian	———	———	Pain in joints (? in tendon sheaths in region of joints). Pains in legs from knees to ankles. Shins tender.	———	Temperature normal throughout stay in hospital (2 weeks), except on September 11, 1917, when it was 37.2° C..

Table IV.

Case No.	Date.	Total Leucocytes.	Percentage of Neutrophiles.	Total Neutrophiles.	Percentage of Eosinophiles.	Percentage of Basophiles.	Percentage of Lymphocytes.	Percentage of Large Mononuclears and Transitionals.	Total Non-Granulars.	Remarks.
9.	July 29, 1918 (3 p.m.)	20,000	51	10,200	—	—	45	4	9,800	400 cells counted. Only two eosinophiles seen. No basophiles. Most of the lymphocytes had pale, expanded cytoplasm. No parasites detected.
10.	Jan. 6, 1918 (3.30 p.m.)	19,800	51.5	10,197	0.5	—	40	8	9,504	700 cells counted. One basophile seen. Most of the lymphocytes had pale, expanded cytoplasm, frequently with azurophile granules. Temperature 37.7° C. when blood was collected.
11.	Dec. 16, 1917	15,800	66	10,428	1.5	0.5	25	7	5,056	800 cells counted. Transitionals were a rather conspicuous feature.
12.	Aug. 1, 1918 (4 p.m.)	14,900	58	8,642	1	—	35	6	6,109	500 cells counted. Two basophiles seen. Lymphocytes mostly large, with expanded cytoplasm.
13.	Dec. 14, 1917 (noon)	12,800	70.5	9,024	3	—	20.5	6	3,392	400 cells counted. One basophile seen.
14.	Nov. 25, 1917	12,000	62	7,440	0.5	—	34	3.5	4,500	600 cells counted.
15.	Nov. 23, 1917	11,000	43	4,730	5.5	0.5	44	7	5,610	600 cells counted.
16.	Dec. 5, 1917	11,000	59.5	6,545	2	0.5	33	5	4,180	———
17.	Sept. 27, 1917	9,000	40	3,600	1	—	51	8	5,310	———
18.	Dec. 10, 1917 (noon)	8,800	44.5	3,916	2	0.5	48	5	4,664	400 cells counted.
19.	Sept. 2, 1917	—	45	—	4	1	45	5	—	———

Table V.

Case Number.	Date of Admission to 3rd Australian General Hospital.	Age in Years.	Nationality.	Onset.	Abdomen.	Head, Back and Limbs.	Laboratory Tests.	General.
20.	Nov. 6, 1917	19	Canadian	November 15, 1917, pain in right side of abdomen and in back. No vomiting.	Soft. Diffuse tenderness on right side. No rigidity. Liver not enlarged.	Tenderness of lumbar muscles, both sides, right more than left. No tenderness of spinous processes.	Urine: no albumin. Fæces: *Lamblia intestinalis*, flagellates and encysted forms. *E. coli* cysts. A few ova of trichiuris.	Admitted with slight wound of left wrist. On November 15 wrist was healed, but temperature rose to 38° C..
21.	Dec. 30, 1917	32	Englishman	Diarrhœa two or three weeks. Mucus and slight blood. (Patient's statement.)	Generalized tenderness. Muscles soft.	Pain in legs and small of back, no headache. Lumbar muscles tender, calf and thigh muscles slightly tender. Back hurts when he turns in bed.	Fæces: no protozoa seen. No dysentery bacilli isolated.	Spent much time in the tropics. Had dysentery there and has had diarrhœa off and on ever since.
22.	Nov. 17, 1917	32	Englishman	November 9, 1917, Casualty Clearing Station. Diarrhœa nine days, blood and mucus. Eighteen stools in 24 hours. November 29, 1917, pains all over.	On admission to 3rd Australian General Hospital, costive, with slight epigastric tenderness.	Thigh, calf and lumbar muscles tender. Shins only slightly tender.	Fæces: while at Casualty Clearing Station examined by mobile laboratory. Report negative. At 3rd Australian General Hospital, fæces contained no parasites or ova (one examination).	On 23rd he was quite well and was allowed to get up. Says he had trench fever three months ago.
23.	Nov. 7, 1917	30	Englishman	Pains in back and legs since October 29, 1917. With pyrexia on 24th symptoms returned.	———	Pain and tenderness in calf, thigh and lumbar muscles, also knee-caps. Shins not tender. Symptoms more marked after the onset of pyrexia.	———	Temperature remained normal from day of admission until day after arising from bed. Slight irritable rash on chest (? scabies).
24.	Nov. 18, 1917	23	Englishman	Pain in back and legs six days. Cough six weeks.	Spleen palpable.	Pain in back and legs most marked when walking. No tenderness of limbs or of lumbar spines or muscles.	Fæces: ova of *Ascaris* and *Trichiuris* present. No cysts seen.	37.5° C. on admission. After this temperature practically normal throughout stay in hospital. Very anæmic. Was at Hong Kong 2½ years. Pulmonary systolic murmur.
25.	Oct. 18, 1917	—	Englishman	Pains all over two days. Cough.	Soft. Spleen palpable.	No objective signs in limbs.	Fæces negative for enteric group of organisms.	Has had rheumatic fever. Apical systolic murmur. Shortness of breath for over two years. Vomited twice on October 23, 1917.

(Continued on next page.)

Table V.—*Continued.*

Case Number.	Date of Admission to 3rd Australian General Hospital.	Age in Years.	Nationality.	Onset.	Abdomen.	Head, Back and Limbs.	Laboratory Tests.	General.
26.	Nov. 28, 1917	28	Englishman	Cough, diarrhœa four days, blood, no mucus. (Patient's statement.)	Slightly distended. Pains in left side. Spleen not palpable.	Pains in head and left loin. Pain in back at night. On December 14, 1917, great pain over left kidney region and in left lumbar muscles, though temperature remained normal. With second rise of temperature severe muscular pains.	Urine: no albumin, sugar, bile or deposit. Fæces: no organisms of enteric group.	Works in lead mills in civil life. Has not been in tropics. Works in Ordnance Department. Has never been in "the line." On admission scattered rhonchi right lung. X-ray left kidney region inconclusive.
27.	Aug. 11, 1917	29	Australian	———	Spleen not palpable.	Headache and general aches in muscles.	Urine: no albumin.	Admitted complaining of conjunctivitis. On August 28, 1917, transferred to medical ward on account of pyrexia.
28.	Sept. 26, 1917	24	Australian	Headache, stiff neck, sore throat and pain in chest four days.	Soft. Spleen palpable.	Pain in hips.	Urine: no albumin. Fæces: no protozoa seen. No organisms of enteric group isolated.	Heart and lungs clear. Throat slightly congested, no patches. Slightly enlarged lymph gland in left groin. No sore in area of drainage. Inoculated typhosus and paratyphosus A and B. (one injection) four months ago.
29.	Sept. 18, 1917	—	Englishman	September 20, 1917, pyrexia, slow pulse.	Spleen palpable. No rose spots.	Pains in head and across lower ribs in front. Slight tenderness right hypochondrium.	Urine: no albumin. Urine and fæces: no organisms of typhoid group. Agglutination tests (done twice) inconclusive.	Admitted to surgical ward with inflammation of connective tissue of the leg. Two days later wounds clean, temperature raised. Transfer to medical ward. Heart and lungs clear. Knee jerks and abdominal reflexes present. Clinically enteric, bacteriologically not proven.
30.	Sept. 18, 1917	—	Englishman	Pains at back of eyes, headache, cough.	Spleen palpable.	Intense headache. Back and limbs not troublesome.	Urine and fæces: no organisms of typhoid group. Blood culture sterile. Agglutination tests inconclusive.	Tongue furred. Heart and lungs clear.

Table VI.

Case No.	Date.	Total Leucocytes.	Percentage of Neutrophiles.	Total Neutrophiles.	Percentage of Eosinophiles.	Percentage of Basophiles.	Percentage of Lymphocytes.	Percentage of Large Mononuclears and Transitionals.	Total Non-Granulars.	Remarks.
20.	Nov. 17, 1917	10,000	49	4,900	6	1	38	6	4,400	500 cells counted. No parasites seen.
21.	Jan. 3, 1918 (3 p.m.)	9,800	68	6,664	1.5	1	24	5.5	2,891	99.8° F. when blood was collected. 400 cells counted.
22.	Dec. 7, 1917	8,400	47	3,948	6.5	0.5	42	4	3,864	400 cells counted.
23.	Nov. 26, 1917 (noon)	8,400	70	5,880	1	1	21	7	2,352	400 cells counted.
24.	Dec. 27, 1917	7,600	59	4,484	5	1	32	3	2,660	Red cells, 2,300,000; hæmoglobin, 60%; colour index, 1.3. Film: Two undoubted megaloblasts, many megalocytes.
25.	Oct. 24, 1917	7,000	58	4,060	1	—	38	3	2,660	
26.	Jan. 1, 1918 (noon)	6,800	54	3,672	4	1	34	7	2,788	600 cells counted. No punctate basophilia seen.
27.	Sept. 9, 1917	6,500	46.5	3,022	11	—	38.5	4	2,762	Only 200 cells counted.
29.	Sept. 27, 1917	6,300	63	3,969	—	—	32	5	2,331	
30.	Sept. 23, 1917	6,000	—	—	—	—	—	—	—	

Tables V. and VI.

The Consultant Physician considered Case 27 to be clinically enteric, although bacteriologically it was not proven.

On clinical grounds he was inclined to think that Case 29 might belong to the same group, but he was by no means emphatic on the point.

Case XVIII.

In Case 27 the conjunctivitis, at the time regarded as accidental, was possibly associated with the disease.

The Blood Picture in Trench Fever.

Hunt and Rankin (*loc. cit.*) found that in eleven cases on which differential counts were made the average percentages were:—

Polymorpho-nuclear cells	58
Small lymphocytes	23
Large lymphocytes	14
Mononuclear cells	3.5
Eosinophile cells	1
Basophile cells	0.5

The percentage of polymorpho-nuclear cells varied between 38 and 70. They consider that the only thing worthy of note is a very slight increase in the lymphocytes. The aver-

age leucocyte count in 24 cases was 10,500, but the individual variations were great, ranging from 4,700 to 22,000. In addition, in some cases, several counts were made on the same patient at different stages of the disease, but the number of leucocytes was not found to vary with the temperature to any great extent.

McNee, Renshaw and Brunt (*loc. cit.*), speaking of the red blood cells in their cases, state that only one pathological feature occurred with any frequency. This was the presence of polychromatophile cells above the normal in size and also, especially in the relapsing cases, of well-marked punctate basophilia. The leucocytes showed no morphological changes and differential counts only indicated a slight relative increase in lymphocytes (large and small), with a rather low figure of hyaline cells.

Strethill Wright(19) found a moderate leucocytosis a common but not a constant feature. Punctate basophilia was observed in the blood films examined, but this phenomenon was also encountered in cases not suffering from trench fever.

Hurst (*loc. cit.*) states that Elworthy, working in Salonica, came to the conclusion that polychromatophile cells above the normal size, with well-marked punctate basophilia, as described by McNee, Renshaw and Brunt, only occurred in the later stages of the more severe cases.

Chambers(20) says that the pyrexia is invariably accompanied by a polymorpho-nuclear leucocytosis. An interesting feature of the blood count is the presence of leucocytosis after the fever has disappeared. The leucocyte count varied in different patients from 8,000 to 22,000.

Patterson (*loc. cit.*) is of the opinion that in both the continuous and relapsing types of "P.U.O." (pyrexia of unknown origin) there is leucocytosis. In the former the count varies from 12,000 to 25,000, with relative increase in the large mononuclear cells.

Sundell and Nankivell (*loc. cit.*) say that the blood shows a small increase in basophile cells and a moderate increase in large mononuclear cells. Both these conditions are common among patients suffering from other diseases. Otherwise no notable changes in the blood are found.

The American Commission (*loc. cit.*) found the leucocyte count very variable. There is frequently a leucocytosis and the leucocytes may rise at the time of the relapse. In other cases the count may be normal or there may be a leucopenia.

Tate and McLeod (*loc. cit.*) consider that a moderate polymorpho-nuclear leucocytosis is a feature of trench fever. Their counts in trench fever patients were as follow:—

	Total.	Percentage of Polymorpho-nuclear Cells.	Total Polymorpho-nuclear Cells.
Pyrexia (24 counts) ..	10,766	.. 65.14	.. 7,013
Apyrexia (11 counts)..	10,283	.. 54.37	.. 5,591

Perkins and Urwick(21) say that punctate basophilia has been noted in only a few of the several hundred cases examined by them and as a diagnostic feature must be considered of very little value. Generally speaking, the disease is associated with a leucocytosis. The polymorpho-nuclear cells and the lymphocytes are nearly always present in more than normal numbers; very occasionally during an afebrile period their number may be diminished. There is, as a rule, a marked rise in the number of leucocytes present in the blood at the time of a febrile relapse. Subject to exceptions, which occur in but very few instances, there is during the febrile period a simultaneous increase in number of both the polymorpho-nuclear cells and lymphocytes. Relatively the increase is greater in the case of the polymorpho-nuclear cells than it is in that of the lymphocytes. During convalescence the number of lymphocytes present in the blood relatively increases. Variations occurring in the number of the large mononuclear cells closely correspond with those affecting the polymorpho-nuclear and lymphocyte counts. In a few cases a pronounced eosinophilia has been met with, the number of eosinophiles present varying greatly from day to day. No cause could be assigned for this condition.

In the present series of cases, all the films were stained by Leishman's method. In none of them was anything resembling a parasite detected.

Red Cells.—Punctate basophilia of the red cells was in no case observed. It was not especially looked for, but had it been a conspicuous feature in the films examined it seems unlikely that in doing the differential leucocyte counts it would altogether have escaped notice. Case 24 was the only one in which gross change in the red cells was detected. Here the alteration was obviously due to anæmia of a pernicious type, but it is improbable that trench fever had any relation to it.

Leucocytes.—Gulland and Goodall(22) regard the average leucocyte count as 7,000, of which 70% are polymorpho-nuclear cells, 20% small lymphocytes and 5% large lymphocytes and transitional cells, so that the total polymorpho-nuclear elements equal 4,900 and the total non-granular cells 1,750.

In the present series of cases the counts show a definite leucocytosis. Polymorpho-nuclear cells and non-granular leucocytes are both increased, the latter to a relatively greater extent than the former; but it must be remembered that many of the counts were made well on in the disease, some of them when the patients were almost in the convalescent stage.

It was noted while the differential counts were being carried out that the appearance of some of the lymphocytes was unusual. In a few cases these closely resembled the cells described by Türk as irritation or stimulation forms, *i.e.*, cells with dark, opaque, slaty blue cytoplasm, without azurophile granules. The size of these cells varied considerably. The most conspicuous were twice as large as an ordinary polymorpho-nuclear leucocyte. Concerning the smaller ones, it was more difficult to be certain, because the line of demarcation between them and ordinary lymphocytes was by no means sharply defined. They were observed in seven cases, their numbers varying from 0.3% to 4%. The patients in whose blood they were noticed, did not present any special features in common and I am inclined to think that they are of little, if any, significance.

Under the heading mononuclear and transitional cells it is quite possible that a few large lymphocytes have been included. Here again the boundary line is by no means always definite.

Eosinophile Cells.—In six cases rather high percentages were noted. In three of these (Cases 8, 20 and 24) ova of metazoon parasites were found in the fæces. In the remaining three no obvious explanation is apparent. In Case 22 one examination of the fæces was carried out with negative results, while in Cases 26 and 27 no mention of any such examination appears in the notes.

The Normal Proportions of Polymorpho-nuclear Leucocytes and Lymphocytes in the Blood of Soldiers in France.

Tate and McLeod (*loc. cit.*) examined the blood of 33 normal soldiers and differential counts were done in 26. The average total count was 8,595, of which 44.8% were polymorpho-nuclear cells and 50.9% non-granular cells. To institute a further comparison the blood of ten patients with nephritis was examined. It was considered that as nearly all these men had distinct bronchitis, they were likely to show a moderate polymorpho-nuclear leucocytosis. The average figures obtained were: Total leucocytes, 11,640, of which 63.87% were polymorpho-nuclear and 34.57% were non-granular leucocytes.

They are inclined to believe that the usual relative proportions of leucocytes amongst soldiers in France is not the "normal" of the text-books. They regard a relative lymphocytosis as the rule amongst the troops in France.

Without definite figures before me, but merely as a general impression after examining the blood of many soldiers in France, I, too, am inclined to think that the percentage of lymphocytes in the blood of many of them is higher than is usually regarded as normal. Three causes suggest themselves:—

(1) After-effects of gas poisoning.

Miller(23) has shown in cases of gas poisoning in which symptoms persist, that there is an increase in the number of lymphocytes relative and absolute in the circulating blood.

(2) "D.A.H." (disordered action of the heart) and convalescence from trench fever.

Grace Briscoe(24) has shown that in cases of irritable heart, while the patients are up and about, there is a decided leucocytosis. In many, and especially in cases of long standing, there may be a relative and absolute lymphocytosis.

Perkins and Urwick (*loc. cit.*) found that, during convalescence from trench fever, the number of lymphocytes present in the blood relatively increases.

(3) Residence in the tropics.

Miller (*loc. cit.*) points out that a slight relative lymphocytosis is not uncommon in men from overseas.

Taylor, of the Rockefeller Institute(25), showed that chronic solar dermatitis was accompanied in 25 of the 38 individuals studied by an appreciable increase percentage and absolute in the number of circulating lymphocytes. Blood counts on white persons living in the Philippines indicated that the blood lymphocytes are likewise increased after a prolonged residence in the tropical zone.

Tate and McLeod seem to infer that in soldiers in France a polymorpho-nuclear leucocytosis is characterized by a percentage of polymorpho-nuclear leucocytes well below what is usually regarded as the normal average (70%). This may be so in some cases, but, in soldiers suffering from purulent infections, the typical neutrophile leucocytosis is, in my experience, not infrequently found.

Cases 31, 32 and 33 are cited in support of this statement.

Table VII.

Patient No. 31 was wounded in the back on April 6, 1918, by a shell fragment and his spinal cord was injured. Eight days later he died as a result of cerebro-spinal meningitis. *Post mortem* there was found in the meshes of the pia-arachnoid of the cord and brain a large amount of pus, showing very numerous long chains of streptococci.

The blood picture presents an interesting contrast with that of Case 6, where the signs and symptoms on admission to hospital were so suggestive of meningitis.

Patient No. 32 was suffering from perinephric abscess, confirmed by operation.

Patient No. 33 was ill with nephritis and uræmia, ending fatally. He had severe bronchitis. *Post mortem* the lungs showed purulent bronchitis and broncho-pneumonia. Pressure caused yellow pus to exude from the bronchi.

In the blood of each of these three patients there were considerably more polymorpho-nuclear cells per cubic millimetre than in any of the 30 preceding cases.

No. 34 is a normal control, whose blood was examined in France and in Sydney three months after his return. In this individual no appreciable alteration in the blood picture is apparent.

It is obvious that the results here recorded are inadequately controlled by counts made on normal soldiers and trench fever patients at different stages of the disease. This omission was the result of circumstances rather than of neglect.

Acknowledgments.

I am indebted to Major-General Sir John Rose Bradford, Consultant Physician to the Abbeville Area, for the general interest he took in our cases, to Major E. W. Ferguson, who carried out most of the pathological investigations noted under the heading "Laboratory Tests" in Tables I., III. and V., to Major F. B. Lawton for permission to carry out investigations on several of his patients and to Sergeant E. Dawes for doing the count on Case 6.

For the clinical notes and blood examinations I myself am responsible.

Conclusions.

(1) In trench fever there is typically a definite, but variable leucocytosis.

(2) There is an absolute increase of both polymorpho-nuclear and non-granular cells.

(3) The increase of the non-granular cells is relatively greater than the increase of the polymorpho-nuclear cells.

(4) The blood picture may in some cases be of definite help in arriving at a differential diagnosis. The leucocytosis helps to exclude enteric fever and the high non-granular count may be of assistance in differentiating trench fever from meningitis, appendicitis, perinephric abscess and purulent conditions generally.

Table VII.

Case No.	Date.	Total Leucocytes.	Percentage of Neutrophiles.	Total Neutrophiles.	Percentage of Eosinophiles.	Percentage of Basophiles.	Percentage of Lymphocytes.	Percentage of Large Mononuclears and Transitionals.	Total Non-Granulars.	Remarks.
31.	April 10, 1918	19,400	89	17,266	—	—	8	3	2,134	Only 200 cells counted.
32.	Sept. 15, 1917	20,000	79	15,800	1	—	17	3	4,000	———
33.	Jan. 9, 1918 (3 p.m.)	26,400	83	21,912	—	—	14	3	4,488	300 cells counted. One eosinophile and one basophile seen.
34.	Jan. 15, 1918	8,100	71	5,751	2.5	0.5	20	6	2,106	400 cells counted.
—	Aug. 29, 1919	8,000	68	5,440	1	—	27	4	2,480	500 cells counted. One basophile seen.

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Reports of Cases.

SUPERACUTE PULMONARY ŒDEMA COMPLICATING THE FIRST STAGE OF LABOUR.

By **Sydney M. Verco, M.B., Ch.M. (Syd.),**
Yankalilla, South Australia.

On October 14, 1919, I was called to Mrs. I.P.H., whose "labour had begun." Her age was 40 years. She was a multipara in her fourth labour. There was a previous history of kidney trouble, said to be of twenty years' duration.

I have attended this patient during the last five years. In 1916 she had her last child. Her urine prior to this had been of low specific gravity, with varying amounts of albumin, generally but little. When her heart compensation broke down, as it did at times, the amount of albumin was increased, but never excessively. Occasionally casts were present. She had a long standing apical systolic murmur.

Her mentality was always low in degree. She was a very simple soul, yet not idiotic. Occasionally she had hysterical outbreaks or nervous storms, bit her tongue and slept long after a period of semi-consciousness. No convulsive movements nor urinal incontinence were observed. Never having seen her during these "attacks," I cannot verify the possibility of epilepsy. I feared eclampsia in her 1916 confinement, but prematernity attention kept her heart and kidneys functioning fairly well and beyond a protracted labour all went well. Since that pregnancy she has had, at intervals, heart failure, with increased amount of albumin during the illness. I do not remember any external evidence of dropsy. Rest, diet and appropriate drugs always relieved the condition.

For this last impending confinement careful oversight was maintained from the second month of pregnancy. During the last ten weeks the patient had come in from the outlying district and had been located near by. *Influenza vera* was epidemic, but she did not become infected.

On September 18, 1919, she had nasal hæmorrhage. I was not sent for till some hours after its onset, but plugging with a pledget saturated with adrenalin solution controlled

the bleeding at once. I judge the loss had been moderate. Beyond a slight cold and the nose bleeding, she did well. Her heart and kidneys were in comparatively good order. Urine examinations had been frequent and satisfactory, presenting either no perceptible albumin or at most a mere haze. As I had regulated her diet, attended to her bowels (which were obstinate), kept a constant watch on her heart and kidneys and secured ten weeks' final ease from domestic duties, I hoped for better results than ensued.

On the evening of October 14, 1919, she had her evening meal in comfort and sat for some little time after with the family. Leaving the room, the midwife followed her, and, after inquiry, sent for me, as it was thought labour had begun. I took the district trained nurse and was in attendance within a quarter of an hour after receiving the message. On entering the bedroom the patient was turning from side to side and crying out. She complained of pain in the lower abdomen. A cursory glance gave one the impression that labour might be further advanced and birth imminent. The sterilizer was set boiling and after disinfection of my hands and patient's external genitals, on vaginal examination the cervix was found to be taken up, the *os* half dilated, the head low and the position left occiput anterior. The patient became more distressed, became dyspnœic and broke into a profuse, cold sweat; her lips were leaden. The pulse was 110 to 115, its volume reduced, but not thready. No œdema of legs was present.

On examination of the chest there was no dulness on percussion and the breath sounds were clear. Her apical systolic murmur was present, but somewhat muffled. *Strychninæ hydrochlor.*, 3 mg., were given hypodermically. Her pulse improved. Up to this there was no air hunger.

I thought to terminate labour and gave 0.5 c.cm. pituitrin, as the cervix had dilated more. While doing this I noticed the incidence of a rattling râle in her chest, which was persistent and profuse. The patient became very agitated and had increasing dyspnœa.

Then the possibility of superacute pulmonary œdema occurred to me. I hoped that the early application of the forceps would, by terminating labour and setting up some degree of hæmorrhage, perhaps relieve the condition.

The instruments were easily applied, no anæsthetic being administered, as, by the time I had got the instruments from the sterilizer the patient had begun to froth over from the lips. She rapidly became worse. I abandoned the attempt to deliver after two slow interval tractions, as she was obviously dying, and with the incomplete dilatation of the cervix delivery was necessarily slow.

From her nostrils and mouth pink-tinged soapsud-like froth was steadily pouring over. Till within five minutes of death the patient was conscious, saying she was dying. There were no convulsions.

Had I recognized what was impending early enough. I would have neither administered the strychnine nor the pituitrin, nor attempted instrumental delivery, but rather simply tried venesection. There was no prolonged premonitory stage. Things happened very quickly. I arrived at the house at 7.15 p.m.; the patient was dead by 7.50 p.m.. From the first noticing of the râles till death supervened was under twenty minutes. One might almost term the condition fulminant.

As a complication, and early at that, of labour, it seems a case worthy of recording.

Reviews.

PLASTIC SURGERY OF THE FACE.

An apt illustration of the recent sudden expansion in the sphere of work of certain specialists is to be seen in Captain Lawson Whale's book on "Injuries to the Head and Neck."[1] For here we find an oto-laryngo-rhinologist who, under pressure of war's emergencies, broke the confines of his specialty to explore and conquer a vast territory that teems with new problems. Certainly the title of his book is not quite justified; the injuries described are those peculiar to war and those of the eye and brain are not considered. But its value lies in the fact that it is full of generalizations that have been evolved from practical experience; they are not the trite platitudes passed into currency by some ancient text book. The author, first at a base hospital at Boulogne and later at the Queen's Hospital, Sidcup, had a vast amount of material to work on, which, with the assistance of dental and prosthetic specialists, he endeavoured to salvage.

He has a kind word for the telephone probe on the removal of deep foreign bodies. In spite of the excellent localization given by stereoscopic and cross-thread methods of X-ray work, there are regions of the head and neck where, even with a wound track to guide, the bullet is not found without great difficulty and much manipulation. Such regions are the upper and posterior parts of the ethmoidal gallery, the sphenoidal cells and the palatine and spheno-maxillary fossæ.

The bugbears of neck injuries are hæmorrhage, septic pneumonia, laryngeal œdema and mediastinal abscess. In the diagnosis of the last-mentioned condition stress is laid on pain late in the act of swallowing and on the spasmodic alterations of pulse and respirations. So sudden and so extreme are these variations as, at times, to cast doubt on the accuracy of the record. Its prevention depends essentially on efficient drainage and posture and probably many surgeons have failed to appreciate the importance in such cases of raising the foot of the bed at the earliest opportunity.

Of laryngeal œdema two clinical types are distinguished; that which comes on within the first 48 hours after injury is of less serious prognosis than the type which developes late in the history of the case. If the distress of these patients is not alleviated by the use of ice and atropine, it is a grave mistake to postpone opening up the air passages until the condition is critical. Of functional aphonia it is recognized that pre-war conceptions were too narrow and too rigid. The range of variation of the laryngeal image is much greater than was formerly thought; nor are the tensors alone or specifically involved.

Probably the most valuable chapters in the book will be found to be those dealing with the repair of facial injuries and the various methods of rhinoplasty. The permanence of a good nose depends very much on the thoroughness with which its nasal supports have been established and these must be insured before getting to work on the proboscis itself. Failure to appreciate this point means that the surgeon is doomed to the disappointment of seeing a shapely nose gradually, but irrevocably, become a mere amorphous projection, recognized as a nose solely because it occupies the anatomical position of that organ.

The scaffolding for this support may be obtained in one of three ways: by using rib cartilage grafts for the bridge and also perhaps for the columella and alae, by a prosthesis, or by utilizing structures within the nose or along its boundaries. In fashioning the nose itself everything must be made too large, so as to allow for shrinking and to prevent stenosis. The shape depends to a great extent on the alar cartilages and the imitation of these structures is a difficult process.

The much-vexed question of primary suture in face wounds is soberly discussed and the author takes the middle way. In spite of the advantages of better drainage and easier access to a fractured jaw given by delayed suture, the author prefers to make some attempt at closure provided that the efficiency of the drainage is not jeopardized. But to attempt faithfully and meticulously to reproduce the contour of the face by primary suture is fatal. The first consideration is the preservation of as much tissue as possible; cosmetics can wait their turn.

The reader realizes that the author has garnered much from his exceptional opportunities and so his work makes a welcome addition to the ever-growing library of war work.

[1] Injuries to the Head and Neck, by H. Lawson Whale, M.D., F.R.C.S., with a Preface by F. F. Burghard, C.B., M.D., M.S., F.R.C.S.; 1919. London: Baillière, Tindall & Cox; Demy 8vo., pp. 320. Price, 15s. net.

Naval and Military.

HONOURS.

The following records of distinguished service for which decorations were awarded, have been reproduced from the *London Gazette* of July 30, 1919, in the *Commonwealth of Australia Gazette*, No. 129, of November 20, 1919:—

Distinguished Service Order.

Major Leonard May, M.C., Australian Army Medical Corps, attached 11th Battalion. During the attack near Villeret, on 18th September, 1918, he displayed great gallantry and devotion to duty, whilst attending to the wounded. In consequence of his excellent organization for clearing the wounded he was able to keep to touch with the advance, constantly moving his aid post forward with the barrage, and maintaining liaison with the attacking companies throughout. He showed great disregard of danger under heavy artillery and machine-gun fire, and by his skill saved many lives.

Bar to the Military Cross.

Captain John Shaw Mackay, M.C., 12th Field Ambulance, A.A.M.C. For conspicuous gallantry and devotion to duty on 18th September, 1918, south of Le Verguier. He moved forward with his bearers closely in rear of advancing battalion and under heavy machine-gun and shell fire, and by absolute disregard of his own personal safety was able to keep in close contact with brigade regimental medical officers. By this action the wounded were evacuated in the quickest possible manner, all congestion at regimental aid posts was prevented, and undoubtedly many lives were saved. (The award of the Military Cross appeared in *London Gazette*, No. 30482.)

Military Cross.

Captain Allan Melrose Purves, Australian Army Medical Corps, attached 2nd Tunnelling Company Engineers. On 29th September, 1918, during the operations against the Hindenburg Line, in the neighbourhood of Bellicourt, he formed an aid post in a forward position. At this point the enemy put down a very heavy barrage, which lasted about six hours, and caused heavy casualties amongst the road party and the infantry in the vicinity. The whole of this time he attended to the wounded in the open, showing great gallantry and devotion to duty, and undoubtedly saved many lives.

Captain Edwin Thomas Cato, Australian Army Medical Corps, attached 1st Battalion. In the operations near Hargicourt, from 18th-21st September, 1918, he showed untiring energy and devotion to duty in his care of the wounded, particularly on 21st September, when in order to give early attention he established his aid post in an open trench which was under shell fire, and moved about the area continually, dressing wounded in shell holes and open country. By his disregard for personal safety and his cheerful confidence he set a splendid example to all.

Captain James Mann Henderson, Australian Army Medical Corps, attached 12th Battalion. During the attack near Jeancourt on 18th September, 1918, he established his regimental aid post immediately in rear of the jumping-off place, and attended to the wounded of his and of a supporting battalion under heavy shell fire in an exposed position. As the attack progressed he moved forward and treated large numbers of casualties in the open. By his energy, disregard of danger and clever organization, he relieved a great deal of suffering, and throughout set a splendid example to those under him.

Captain Kenneth Claud Purnell, Australian Army Medical Corps, attached 11th Field Artillery Brigade. For conspicuous gallantry and marked devotion to duty during the attack on the Hindenburg Line, south of Vendhuile, on 29th September, 1918. He dressed the wounded under very heavy shell fire, and organized a stretcher partly, and conducted them to the battery positions, and by his personal and untiring efforts assisted in getting them to the nearest dressing station, a distance of about 1,000 yards, and still under heavy fire. Throughout the day he worked splendidly.

THE HEALTH OF THE METROPOLIS OF ADELAIDE.

The Metropolitan County Board, which acts as a health authority for the metropolitan area of Adelaide, obtains its legislative powers from the *Food and Drugs Act, 1908*, and the *Health Acts, 1898-1911*. The Board has issued its annual report for the year 1918. The following is a brief summary of those portions of the report dealing specifically with health matters. During the course of the year Dr. P. Bollen was appointed a Deputy Officer of Health.

An arrangement was arrived at between the Federal Quarantine Department, the State Government and the Local Board of Health, imposing on the Metropolitan County Board the duty of maintaining a special supervision of the wharves of Adelaide. This arrangement came into effect in 1912. The activity of the Board has been manifested in the endeavour to free the wharves of rats. The State Government has been in the habit of contributing £100 annually towards the cost of this work. No provision for such advance, however, was made on the estimate for the financial year 1917-1918. Representations were made by the Board and it was pointed out that the work had been continued for six months, on the understanding that the usual subsidy would be granted. The State Government eventually paid £50 as a final settlement of all claims. The Board gave notice that the work would be discontinued on March 31, 1918. It is assumed that the obligation to continue the work of rat destruction would devolve on the Harbours Board and, on this assumption, the Board terminated its arrangement with the Local Board of Health and with the Quarantine Department.

The inspection of premises in Port Adelaide was undertaken by the Metropolitan County Board in collaboration with the Port Adelaide Local Board of Health. In order to effect this work, an additional inspector was appointed.

In a series of appendices information is given concerning the results of analyses of samples of milk, the nature of food stuffs destroyed when found unfit for human consumption, concerning the number of premises inspected and the results of the inspections and, finally, the number of cases of infective disease notified and their connexion with trade premises. Out of a total of 278 samples of milk, 30 were found to be watered. The maximum addition represented 33% of its bulk. In the course of the 12 months, 7,611 inspections of premises, the majority of which were used for the manufacture, preparation or purveyance of food, were made. Notices were served in 349 instances, for the purpose of remedying defects and the notices were complied with in 282 instances. There were, in all, 40 informations and, as a result, the same number of convictions. The fines for adulterating milk amounted to £119 10s., imposed on 27 persons, or an average of £4 8s. 6d. per offender. In three instances the charge was being responsible for "offensive premises." The fines in these instances amounted to £3 10s., or about £1 1s. per offender. On the other hand, a vendor was fined £7 for selling contaminated beer. Comment is unnecessary.

The total number of cases of diphtheria notified in the areas over which the Board has control, was 209. Of these, 170 were notified to the local Boards and 39 to the Metropolitan County Board. In 39 instances the infection is stated to have arisen in connexion with trade premises. There were 147 cases of scarlet fever, 50 of which were associated with trade premises. The trades involved included, in order of frequency, flour mills and bakeries, grocery shops, bacon curers' and butchers' premises, restaurants and fish shops, fruit and vegetable shops, cool stores and markets, general stores, chemists' shops, etc.. There were 86 cases of pulmonary tuberculosis, including 18 connected with trade premises. There were 31 of erysipelas, of which 11 were connected with trade premises; 30 of pertussis, including 11 connected with trade premises; 20 of morbilli; 12 of enteric fever and smaller numbers of influenza, cerebro-spinal meningitis, puerperal fever, favus and bilharziosis. Of the 12 cases of enteric fever, eight were traced to trade premises as follows: four to flour mills, bakehouses and shops and one each to registered dairies and milk shops, grocery shops and warehouses, aerated water and ice cream shops and chemists' shops and warehouses.

The Medical Journal of Australia.

SATURDAY, NOVEMBER 29, 1919.

Our Safeguard.

A full year has passed since the signing of the armistice. Throughout the long months the leading representatives of the nations disputed and haggled, talked and wrote and read at Versailles. Eventually there emerged a document, supplemented by another, which was intended to keep the world at peace. The final act has not yet been accomplished to give peace to the world. One great nation is still unconvinced of the practicability of the instrument that has been devised to prevent the recurrence of war. The result of all this parleying, of all these debates and struggles is still in the lap of the gods. The world stands today on the edge of a dangerous precipice and the relatively insignificant wars that still deface many corners of Europe, do not portend well for a prolonged and safe peace. Grave financial burdens, menacing industrial unrest and uncertainty concerning the immediate and remote future cause men to feel uneasy. The vast British Empire is, however, not in danger. Notwithstanding the immense losses of the war and nothwithstanding the malignant influences of those political intriguers who do not hesitate to subordinate national safety to personal advantage, the British Empire possesses a safeguard that has not failed her and that will not fail her in the future. The British Navy can be trusted to preserve our shores, even if the League of Nations is required to keep war at arm's length. It is a mistake to trust blindly without action. The Navy has been Britain's bulwarks in the past, but unless the people determine to maintain Britain's command of the seas, some other nation may wrest it from her in the future. There are many ways in which citizens can work to this end. The members of the medical profession have the duty of building up a strong medical service in the Navy. If the organization is found to be inadequate and if the conditions of service are not acceptable, opinions should be expressed freely and pointedly, in order that the necessary reforms may be introduced without delay. The members of the medical profession, like every other individual in the Empire, can and should join the Navy League, which stands for active propaganda and for efficient sea service. The League seeks to inculcate in the mind of every citizen that the British Empire must maintain as a basis of her national and Imperial policy the command of the seas. The League urges that every legitimate means shall be adopted to remove the direction of naval affairs from the arena of party political controversy. It aims at an education of the young in a sound knowledge of naval history and at an awakening in the breast of every child, a pride in Britain's power on the sea. The Navy League does not limit its activities to the Royal Navy and the Royal Australian Navy. It regards the mercantile marine as a force of immense significance in the maintenance of the traditions of the Empire and of the safety of its peoples. In 1918 a strong Branch of the League was formed in New South Wales, thanks to the untiring exertions of Mr. Alfred G. Milson. Stimulated by the encouragement given by Lord Jellicoe, Mr. Milson gathered around him a large number of influencial citizens and established the Branch on a permanent footing. He has been selected as one of the honorary secretaries and communications may be addressed to him at The Navy League, Royal Naval House, Sydney. A live Branch has also been instituted in Victoria, largely in response to the energy of the present honorary secretary, Dr. Percy S. Webster ("Lincoln," Domain Road, South Yarra, Melbourne). In Queensland a Branch has been formed and is attracting an increasing number of active citizens. The honorary secretary is Mr. A. Lucas, 3 Darragh's Buildings, 331 Queen Street, Brisbane. In South Australia Mrs. Preedy has accepted the position of honorary secretary and is proving her competence in gathering into the Branch many members. Her address is 16 North Terrace, Adelaide. In addition a sub-branch has been started in Newcastle, New South Wales, and good spade work has already been carried out. The annual subscription to the League is one guinea.

In recommending our readers throughout the Commonwealth to join the Navy League and to take an

active part in strengthening the bond of Empire and its safety, mention should be made of the Naval Prize Essay Competition, which is being organized in the New South Wales Branch as an educative measure. The competition is open to all children attending public, secondary and elementary schools. The subject for the senior children for the competition to be closed on April 30, 1920, is "Sea Communications: Their Value and Protection," and for the juniors "The British Navy: Great Events in its History." The wisdom of instilling into the growing mind a sound conception of Britain's position on the sea will appeal to everyone. We heartily commend the Navy League, as a non-party organization, "whose primary object is to urge upon governments and electorates the paramount importance of an adequate Navy as the best guarantee of peace."

A PUBLIC HEALTH PROBLEM.

There are certain branches of medical activity which by common consent have to be performed by departmental medical officers. It has, unfortunately, become the fashion to regard the public medical services as second-rate organizations, largely because the salaries of the medical officers employed by governments are necessarily smaller than are the incomes of successful private practitioners. This attitude is all the more to be deplored, since the knowledge required of an expert hygienist needs to be at least as extensive as that of the private practitioner and his duties are even more responsible, in that they embrace the welfare of the whole community as compared with that of the individual. The departmental medical officer has duties to perform in full view of the public and his actions are open to criticism. He does not enjoy the privilege of the private practitioner, who has but to satisfy the individuals with whom he comes into intimate relationship. The unquestioned importance of the work of preventing disease or incapacity should enhance the esteem in which the activities of the departmental medical officer are held. The public should see that the conditions of service are sufficiently attractive to tempt the most scientific members of the medical profession to undertake this form of work. We are fast approaching a parting of the ways. In a short time preventive medicine will claim the greater part of our energies and the public will regard the preservation of health as one of the most important of the duties of those to whom it entrusts the government of the country. The medical profession recognizes these facts. The British Medical Association throughout the British Empire has declared itself in favour of an extension of the public health services. In one respect preventive measures in Australia have lagged behind those of Great Britain in the past. For many years the authorities have recognized that industrial hygiene is a living subject and that the health of the industrial worker should be properly safeguarded. There has existed for very many years a medical branch of the Factories Department of the Home Office. This branch has been directed by a highly skilled and eminent hygienist, Sir Arthur Whitelegge, and the medical inspectors, Dr. T. M. Legge and Dr. E. L. Collis, are well known for their valuable contributions to the science of industrial hygiene. The *Factories Act*, which governs to a large extent the activities of this department, is a somewhat clumsy and complicated legislative measure, but its provisions enable the medical officers to prescribe the nature and extent of the safeguards against accident and disease to be adopted in factories and other places of employment, to control the manner in which these safeguards are to be applied and to investigate the causes of industrial accident and disease in order that the various forms of employment may be made as safe as human ingenuity can render them. The medical officers are consulted by the officials in charge of the other branches on all matters directly or indirectly involving questions of hygiene and the health of the workers. The history of industrial hygiene contains ample evidence of the immense value of the work of this branch of the Factories Department. If further evidence be required to substantiate the claim that industrial hygiene cannot be developed to its full extent without the collaboration and aid of highly-trained medical experts, we would refer the doubter to the new *Journal of Industrial Hygiene*, a British production of exceptional merit. In its pages will be found records of achievements both in Great Britain and in America in the sphere of the subject under discussion.

It is to be regretted that hitherto the conditions of factories and mines in Australia are subjected only to technical and general control. Important questions connected with industrial hygiene have been investigated by medical men in the Commonwealth from time to time, usually at the request of a government department. There is, however, no medical branch of our departments of labour and industry and the work of inspection is exclusively non-medical. The work necessitates prolonged and intense study of the conditions of labour in factories, of the processes used, of the available means for reducing risk of accident, poisoning and occupational disease and of the special pathology of these diseases. We suggest that medical officers should be appointed to guide this work into the proper channels and thus to benefit the industrial worker.

EVADING RESPONSIBILITIES.

On November 14, 1919, the attention of the Board of Management of the Hobart General Hospital was drawn to an article which appeared in this *Journal* on November 8, 1919, relative to the diploma on which Victor Richard Rattan obtained registration as a medical practitioner in Tasmania in the year 1907. The chairman considered that the matter was one with which the board could not deal. When requested to bring the matter to the notice of the Chief Secretary, he stated that the published reports would do that. According to the *Mercury* of November 17, 1919, the Chief Secretary stated that he declined to submit the question for full investigation to a Royal Commission. The British Medical Association, having obtained evidence which seemed to require further investigation, should place that evidence before the properly-constituted tribunal, the Medical Council, whose duty it would be to investigate the same. In the course of his statement, the Chief Secretary is reported to have made the following convenient, but wholly misleading, announcement in reply to the claim that the Government had on the previous occasion objected to allow the Medical Council to proceed with the inquiry on the ground that the Medical Council would be biassed: "That is true up to a point, but one of the principle reasons for objection was the imperfect nature of the *Medical Act* under which that Council would then have exercised its power. The position to-day is different in that the Act has been amended with a view to giving any medical practitioner charged with improper practices the fullest opportunity to vindicate his position." In the present *Medical Practitioners Act* the right of appeal is specifically provided, while Section 11 of the Act of 1908 sets out that the Supreme Court may compel the Council to register a person or to restore his name to the register, if he "shall have been unreasonably refused registration or removed from the register by the Council." The present act is a measure which was rushed through Parliament for the particular purpose of enabling the Government to find persons willing to work in the public hospitals at the bidding of the Government, in defiance of the policy of the medical profession throughout the British Empire. The members of the present Medical Council have been nominated by the Government and the majority are at present accepting payment from the Government. We can only repeat that if the former Medical Council, which was comprised of upright medical practitioners, could not be trusted to give the respondent a fair hearing, the present Council must be regarded as being even more inclined to take a partial view.

The Government must either institute some form of inquiry or must take the responsibility for shielding a person whom it has placed in a positon of trust. In the first instance the Government took the inquiry out of the hands of the Medical Council and submitted it to a Royal Commission, but, at the same time, restricted the inquiry to such an extent that it became a mere farce. The findings of the Royal Commission were in keeping with the action of the Government. The findings were based on a cabled message from a person who, according to our contemporary, *The Journal of American Medical Association,* has been convicted for selling a bogus diploma. The public of Tasmania may be satisfied with the plausible statement of the Chief Secretary. We demand that the Government shall now institute a real inquiry into the question that ought to have been settled finally and judicially in November of last year. The Government took the matter out of the hands of the medical profession then and has no justification to expect the British Medical Association to proceed now in order to save the Government considerable inconvenience.

THE TREATMENT OF RETURNED SOLDIERS.

We have received a copy of a letter issued by the Defence Department to the several military districts, dealing with the question of the treatment of returned soldiers. The letter is as follows:—

> Requests are from time to time being made to Headquarters for refund of medical expenses to returned wounded soldiers who have been operated on privately by medical officers on the reserve or even on the active list. It is desired that the P.M.O. instruct all medical officers in the Military District that the payment of such fees or any part of them will in no case be undertaken by the Department.
>
> It is the duty of military medical officers when consulted privately by returned soldiers to point out the fact that they are entitled to free treatment through the military hospitals and in most instances treatment by the actual medical officer consulted could be arranged.

The arrangement dealing with the treatment of returned men after discharge is set out in a letter from the Comptroller of the Department of Repatriation (see *The Medical Journal of Australia,* November 8, 1919, page 409).

It has been announced that Sir Edmund Barton, Mr. Justice Street and Mr. A. B. Piddington have been elected by the Fellows of the University of Sydney to the University Senate. Sir Edmund Barton and Mr. Justice Street have held these positions during the past five years.

Abstracts from Current Medical Literature.

DERMATOLOGY.

(187) The Ætiology of Molluscum Contagiosum.

In a preliminary report of their experimental work on the ætiology of *molluscum contagiosum*, Udo J. Wile and Lyle Kingery state that since Bateman's original description in 1817, but little doubt has existed in the minds of clinicians as to the contagious nature of this disease (*Journ. Cutan. Diseases*, July, 1919). Since 1881 various organisms have been described as being causative and a popular belief amongst many has been expressed that the so-called molluscum bodies represented some unusual form of organism, whereas they merely represent a peculiar form of epithelial degeneration. As far back as 1841 successful inoculation experiments from material obtained from molluscum lesions were made by Peterson, who was later followed by other observers. The period found to elapse between inoculation and the appearance of experimental lesions varied greatly, for in one case they appeared in five weeks, in another four months elapsed and between these extremes all periods were recorded. In an experimental study of *molluscum epitheliale* in fowls and pigeons, Marx and Sticker observed the period of incubation to vary from eight to ten days. To investigate the incubation stage in man, the authors secured material from molluscum lesions and ground it up with a minute amount of physiological salt solution in a mortar. The material was afterwards passed through a sterile Berkefeld filter of the smallest size. The apparatus was then subjected to negative pressure by means of a suction apparatus attached to a sterile test tube below the filter. The filtrate thus obtained was immediately transferred to agar slants to test its sterility and was then injected intracutaneously into the skin of the back. In the first patient erythema and a slight infiltration were noticed on the twelth day, from which time the lesions increased each day in size and induration. On the sixteenth day the clinical diagnosis of *mulluscum contagiosum* could be easily distinguished. In the second patient, on the twenty first day, a few pin head-sized, reddish yellow papules were observed, but it was not till about four weeks later that it was possible to make a clinical diagnosis of *molluscum contagiosum*. From their observations they are of opinion that the period of incubation depends on a number of conditions in which individual predisposition or susceptibility plays a rôle. The disease is caused by a filterable virus and the so-called molluscum bodies require a longer period for their development than is required for the development of the macroscopic lesions. They represent a degeneration stage in the evolution of the molluscum tumour.

(188) Lepothrix.

In the reports of the committee on statistics of the American Dermatological Association, for a period of thirty-four years, Politzer found that only fourteen cases of lepothrix had been reported in America by members of his association, yet John E. Lane is of opinion that lepothrix is an extremely common disease and is usually overlooked (*Journ. Cutaneous Dis.*, June, 1919). In an examination of 128 men drafted for the Army, he found it to be present in 51. Of 100 white men, there were 43 affected, and of 28 negroes of various shades, eight were affected. The great majority of cases of lepothrix are found in the axillæ, but the genital region may also be affected. Subjective symptoms are usually absent, but occasionally there may be pruritus, pseudo-chromidrosis, whilst hyperidrosis is frequent and bromidrosis is occasionally found. Classed by the colour, three types of the growth are recognized. Most frequent is the reddish brown variety, varying in its shade, then the yellowish, generally present in blondes, and the blackish, of rarer occurrence. Castellani described a disease occurring in Ceylon, to which he gave the name *trichomycosis flava, rubra et nigra* of the axillary regions and which he later considered to be a variety of lepothrix. He found the yellow and black varieties to be the common types in Ceylon, the red of less frequent occurrence. He has noted two varieties to be present in the same patient, the hairs of one axilla being surrounded by a yellow sheath, whilst the hairs of the other armpit were surrounded with a black sheath. The disease has been observed to subside or disappear on the patient going to a temperate zone, or is reduced to a minimum in the cool seasons or at high altitudes. Castellani describes a bacillus-like fungus which he calls *Discomyces tenuis* and which he regards as the cause of the yellow variety. The black and red varieties he attributes to the same fungus, in addition to symbiosis with chromogenic cocci. The author is of opinion that it is as frequent in scrupuously clean individuals as in dirty ones and that the most efficacious method of treatment is shaving and the application of various antiseptic lotions.

(189) Röntgen Ray Indications for Tooth Extraction.

Byron C. Darling makes a plea for more frequent and skilled radiological examination in all cases of supposed focal infection of dental origin (*Amer. Journ. Röntgenol.*, March, 1919). Definite appearances are shown in skiagrams of affected teeth and opinions can be given on the efficiency of the root fillings. Great differences of opinion occur between dentists as to the correct methods of dealing with these septic foci. Darling is of opinion that the condition can rarely be cured by treatment through the root canal and that extraction is called for in the great majority of cases. The weight of medical and dental opinion at present favours the latter course also. It is practically impossible to guarantee an aseptic root filling, as abscess formation occurs in the practice of the most proficient surgeons. Electrolytic medication of the root canal is still in an experimental stage, but promises well. Skilled Röntgenology is necessary and it is not possible for the average dentist to do his own Röntgenological work efficiently. Few dentists can perfect their technique and poor pictures are both useless and dangerous. Numerous interesting skiagrams illustrate the article.

(190) The Value of Radium.

Radium was at first hailed as a cure-all, but gradually its true value has been assessed and more moderate claims are made as to its value in therapy. W. H. B. Arkins insists that the failures of radium have been due to lack of experience and defective knowledge of the characteristics, dosage and methods of application and to an injudicious selection of cases (*Amer. Journ. of Röntgenol.*, September, 1919). Too small a dose will stimulate a malignant growth, whilst overdosage will destroy healthy tissues. Accurate diagnosis must precede treatment. Squamous-celled epithelioma requires four times the dose necessary for the basal-celled variety. Cosmetic results following radium therapy are very good. Insufficient attention is usually given to the treatment of such benign growths as moles, warts, birth marks, etc.. Uncomplicated uterine fibroids rapidly yield to treatment and the hæmorrhage which often accompanies this condition, is rapidly controlled by efficient treatment. Patients with myelogenous leukæmia are greatly benefited and their life may be prolonged and comfort given. Attention is also directed to the value of radium in the relief of inoperable and fungating malignant disease. The foul ulcerations of the advanced stages can be healed over and the discharge abolished.

(191) Röntgen Ray Burns from Secondary Radiation.

James Metcalfe reports of burning of himself by secondary radiations from his wristlet watch and from the metallic parts of the suspenders (*Proc. Royal Society of Medicine*, June, 1919). When X-rays strike any hard substance, secondary rays are emitted of softer quality than the incident rays. The hardness of these secondary rays increases with the atomic weight of the metal. In the author's case the burn slowly developed on the wrist and the burns from the suspender metal did not develope until six weeks after the last exposure. He states that he wore gauntlets and the usual tube protection was in operation. He also states that he was using the same type of tube with which he had worked for many years. It may therefore be inferred that the burning was not due to the highly penetrating rays which are obtainable from the Coolidge tube.

BIOLOGICAL CHEMISTRY.

(192) Investigation of Vitamines.

Harriette Chick and E. Margaret Hume (*Journ. Biol. Chemistry*, September, 1919) draw attention to the importance of accurate and quantitative measurements in experimental studies upon nutrition and accessory food factors. They submit a criticism of much research recently published on the subject of vitamines and of some conclusions made in respect to the value of different articles of food. The conception of accessory food factors was introduced as a result of investigations upon beri-beri by Eijkman, Grijns, Fraser and others, upon scurvy by Holst and on "growth factors" by McCollum. A constant stream of papers have appeared in which attemps have been made to assign values to different foods in respect to antineuritic, antiscorbutic or growth-promoting properties and to determine the extent to which these properties have been destroyed by heating or drying the foods for the purpose of preserving them. According to the authors one consideration, *viz.*, quantity, has been overlooked in many studies in consequence of which the conclusions drawn are frequently untrustworthy. The authors have found from their experimental studies that the first step in comparing the values of a series of articles of food is the measurement of the minimal daily quantity which will maintain health in the animal under investigation. A comparison may then be instituted between these amounts. The quantity of food taken during each day should be increased as much as possible before the conclusion is made that it is lacking in one or more of the accessory food factors. Similarly in observing the effects of different processes for keeping foods in a wholesome state, it is needful to ascertain the minimal daily quantity of the original untreated material and of the same food after preservation, which will protect the animal experimented upon under the conditions of the investigation. Neglect of these simple and fundamental, but tedious, methods is evident in many papers. It is obvious that, if a food rich in a particular vitamine is fed to an animal in large excess of the amount required, any destruction that may occur upon treating it, cannot be assessed and may even be undetected if the treated material is fed in large quantities. As an example, the authors refer to a paper by Daniels and McCurg on the influence of high temperatures and of alkalies on the antineuritic properties of foods. The attempt was made to ascertain the content of "water-soluble growth factor" in navy beans, soy beans and cabbage after exposure to heat and after treatment with alkalies. The experiments were made upon rats receiving a basal ration of salts, butter fats, casein, lard and starch. The dried weight of the beans was about one half of the dry weight of the total diet and in the case of cabbage 250 gm. were added to 100 gm. of the basal ration. The amount of the food eaten was not measured. In all cases the animals grew and thrived well. The proportion of beans or cabbage in the ration is so high that the authors consider that the amount could have been quartered or even further reduced without interfering with the health of the animals. The authors point out that the conclusion that "neither high temperature nor dilute alkalies at the boiling temperature are very detrimental to the antineuritic vitamines in food" is in opposition to the inferences drawn from their experiments in which measurements were made as accurately as the conditions will allow.

(193) Maintenance and Reproduction with Grain as the Sole Dietary.

E. B. Hart and H. Steenbock have tried to discover whether normal maintenance and reproduction can be secured when grains and their products constitute the entire diet (*Journ. Biol. Chemistry*, September, 1919). There is now available ample proof that mammals and fowls do not grow at the usual rate when grains or their byeproducts make up the whole of the food. To secure a normal growth a diet must contain additional inorganic salts, more suitable proteins and the fat-soluble vitamine. In some animals an antiscorbutic food must be added and roughage is probably necessary for all species. The authors point out that grains may be deficient in constituents needful for growing animals and not sufficiently rich to supply nutriment for reproduction and the rearing of the young, but may be able to maintain the weight of the developed animal. Grains are deficient in the mineral constituents, sodium, calcium and chlorine. The addition of common salt to the ration is well established, but the practice of giving salts of calcium is rarely followed. The salts are not used, but materials rich in lime, as milk, tankage and the green parts of vegetables are used to supplement the grain. A preliminary experiment upon adult rats fed upon wheat, barley or maize ground into powder has shown that the weight cannot be maintained in equilibrium, though a group of rats have not lost much weight during 40 weeks upon a ration of maize. The authors have conducted an extensive series of experiments upon pigs. These have revealed that the decline in weight is slow when the diet consists of grain supplemented with salt and natural water, but that there is a distinct association between the diet and the number of still-born pigs in each litter. The longer the period on which the sows have been kept on the ration of grain, the greater the proportion of dead pigs among the offspring. As the authors consider that there is an unnecessary loss of pigs in swine husbandry from this cause, they have completed this careful and exhaustive study of the effect of grain diet on nutrition. From the practical standpoint it is usual in some districts in the United States to feed pigs with grain alone during the winter months. No one grain seems distinctly superior to another in regard to the capacity of maintaining equilibrium in weight, but pigs decline more rapidly with barley than with oats or corn. Dietary restrictions to grains and their products reduce to a measurable extent the breeding potency as evidenced by the disappearance of œstrum and a delay in its frequency. Similar results have been obtained with cattle fed on a single grain and a roughage of low mineral content. The authors consider deficiency in calcium as the disturbing factor and discuss the hypothesis of an alteration in the permeability of the intestinal wall as a result of the altered proportion of sodium and calcium.

(194) Preparation of Silica Jelly.

A. T. Legg (*Biochemical Journal*, July, 1919) describes the preparation of silica jelly for use as a bacteriological medium. This jelly is employed when it is desired to provide a medium free from combined nitrogen. The jellies are dialysed during their preparation and success depends on the use of a membrane of a permeability varying within certain limits. The author uses collodion membranes made by pouring a solution of collodion into a test-tube and by spreading the collodion on the walls of the tube by rotation. When the collodion has dried sufficiently, water is poured into the tube. Distilled water is used for dialysing the jelly. Sodium silicate and hydrochloric acid in certain proportion are used to form the silicic acid. The dialysis is continued for two days. When the acid solution is neutral to litmus, the solution is poured into a beaker. The nutrient salts are added and the liquid boiled for five minutes. The medium is placed white hot in the tubes. The tubes are then sterilized in an autoclave. The final stages should be carried out as quickly as possible. The autoclave should be heated to near the boiling-point before the silicic acid is removed from the collodion dialyser.

(195) Estimation of Urea.

J. B. Sumner describes a rapid method for estimating the amount of urea in urine (*Journ. Biol. Chemistry*, May, 1919). A small quantity of urine is treated in a centrifuge tube with an approximately neutral phosphatic solution and with urease. When the urea has been converted into ammonia, a precipitant for protein is added. The mixture is spun in the centrifuge to remove the deposit. An aliquot part of the clear supernatant liquid is removed. It is then Nesslerized direct and the concentration of ammonia in it determined. This method yields good results when attention is given to a number of details. The author sets out concisely the various pitfalls and gives clear directions how each step in the series of operations should be performed. A series of parallel determinations with the Marshall-van Slyke-Cullen aeration methods is appended. These show a close approximation between the new rapid method and the slow standard process.

British Medical Association News.

MEDICO-POLITICAL.

A meeting of the Victorian Branch was held at the Medical Society Hall, East Melbourne, on November 12, 1919, Dr. J. Ramsay Webb, the President, in the chair.

The President welcomed the following medical officers, who had recently returned from active service abroad:—

Majors W. H. Collins, D.S.O., E. R. Cordner, J. P. Fogarty, A. C. Fraser, W. W. S. Johnston, A. H. Joyce, P. A. Maplestone and A. E. Rowden White.

Captains A. H. Barrett, A. J. C. de Bavay, V. C. Brown, M.C. and Bar, J. I. Connor, A. H. Crowley, H. F. Elvins, F. W. Fay, J. M. Henderson, H. H. Holland, H. R. Hyett, W. A. Luke, M. H. Mailer, W. J. Newing, E. A. Spowers and E. W. B. Woods.

Dr. C. H. Mollison and Dr. Reginald Webster were appointed scrutineers for the election of office bearers and members of Council for the ensuing year.

The President read a letter addressed by the Honorary Secretary of the Federal Committee to the several Branches of the Association in Australia. The purpose of the letter was to inform the Branches that the Council of the New South Wales Branch had given notice of motion to be moved at the next meeting of the Federal Committee, as follows:—

> That steps be taken by the Federal Committee to organize a triennial (? biennial) British Medical Association Australia (? Australasia) Medical Congress, to come into operation upon the winding up of the Australasian Medical Congress; such British Medical Association Medical Congress to be undertaken by the Federal Committee on behalf of all the Branches in Australia collectively (? the New Zealand Branch being invited to co-operate), or, in the alternative, to be undertaken by each Branch in Australia in turn, or in such other way as the Federal Committee may determine.

Mr. G. A. Syme gave an account of the events leading up to the present position concerning the Australasian Medical Congress and referred to an editorial article and some correspondence which had appeared in this *Journal*. He moved formally that the Victorian Branch instruct its delegates to the Federal Committee to support the motion of the New South Wales Branch.

Dr. J. Newman Morris seconded Mr. Syme's motion.

Dr. A. L. Kenny dealt fully with the whole subject and expressed the opinion that, with its present membership strength, the British Medical Association in Australia could successfully organize a congress. The motion was carried without dissent.

The undermentioned have been elected as members of the New South Wales Branch:—

H. A. C. Wall, Esq., M.B., 1915 (Univ. Sydney), 84 Cavendish Street, Stanmore.

C. R. Alexander, Esq., M.B., Ch.M., 1918 (Univ. Sydney), Bundarra.

E. P. Barbour, Esq., M.B., 1915 (Univ. Sydney), Dorrigo.

Edward A. Woodward, Esq., M.B., Ch.M., 1917 (Univ. Sydney), University Club, Castlereagh Street, Sydney.

F. H. May, Esq., L.R.C.P., Lond., 1890; M.R.C.S., Eng., 1890; L.S.A., Lond., 1890; D.P.H., Fac. Phys. Surg., Glasg., 1891, Gunnedah.

L. W. Nott, Esq., L.R.C.S.E., L.R.C.P.E., L.R.F.S. and P., Glasg., 1918, "Woongarra," Cremorne.

Clarence Archibald Mitchell, Esq., M.B., 1916 (Univ. Sydney), Royal North Shore Hospital, St. Leonards, has been nominated for election as a member of the New South Wales Branch.

PUBLIC HEALTH WORK IN NEW SOUTH WALES.

The report of the Director-General of Public Health of New South Wales for the year 1917 is a volume of 280 pages of foolscap size, exclusive of charts and special plates. Each copy is produced at a cost of 7s.. The contents of the report are similar to those of the previous annual reports. There is a letter of presentation, a record of the public health administration, a record of the work of the three sanitary districts, a report on an outbreak of mild small-pox, a series of reports from the several State Hospitals and the report of the Micro-biological Laboratory.

Health Legislation.

The Director-General calls attention to the fact that the *Public Health Act, 1896-1902*, had proved to be insufficient for its purpose and that its provisions did not enable his Department to take efficient action in all the changing conditions. The Department was frequently hampered through want of legal authority, more especially in regard to the control of recently-introduced forms of disease. "Legislation is required which will give the Board of Health power to advise the proclamation of any illness as a 'dangerous, infectious or contagious disease,' and for such proclamation to then confer authority upon the Department for compulsory removal to and detention in hospital, where necessary, in their own or the public interest, of persons suffering from diseases of the nature referred to; also for the examination and control by authorized medical officers of 'carriers' of the germs of infectious diseases, or of the contacts of persons suffering from such diseases, and for the isolation of such persons, where necessary, for the public welfare." It is further pointed out that legislative power should be granted for the destruction of animals, in the endeavour to prevent the transmission of disease processes to man. The Director-General of Public Health refers specifically to the prevention of plague, of bilharziosis and of anchylostomiasis. In regard to the latter disease, he refers to "an extensive inspection of the sanitary conditions" in the coal mines of the Newcastle District, which was carried out by the Acting Medical Officer of Health for the District in the latter half of 1917. No indications that the disease had reached New South Wales up to that time were discovered. On the other hand, it was ascertained that the sanitary conditions in certain mines were far from satisfactory. The Director-General seeks power to deal with these matters. He refers to the confusion which results from the existence of a large number of statutes dealing with health, food and sanitation. The multiplicity of legal enactments and of the regulations attached to the various measures increases the difficulty of administration.

Venereal Diseases.

During the year 1917 the means adopted for the purpose of preventing the spread of venereal diseases were limited to the preparation and distribution of posters and pamphlets containing advice for the avoidance of infection and emphasizing the necessity of early and adequate treatment.

The provision for treatment within the metropolitan area was limited to the night clinics at the Royal Prince Alfred and Sydney Hospitals, while outside the city of Sydney arrangements were made for the in-door treatment of patients at the Coast Hospital and the State Hospitals at Rookwood, Liverpool and Newington. In regard to the night clinic at Royal Prince Alfred Hospital, the number of patients treated at one time in 1915 was 500. In 1916 the number was increased to 800, but it was found to be impossible to continue the high pressure of work entailed by so many patients. The hospital authorities therefore reduced the maximum number at first to 400 and later to 200 persons. The total number of persons who received treatment as out-patients at the venereal diseases clinics during the year 1917 was 1,413, while 1,109 were treated in the wards. Of these, 918 out-patients and 362 in-patients received treatment at the Royal Prince Alfred Hospital. The proportion of males to females at the night clinics was three to one, while it was two to one in the case of in-patients.

Reference is made to the need for an amendment of the *Medical Practitioner's Act* by the suppression of quackery and the prohibition of advertisements by persons claiming that they are competent to cure venereal diseases.

The other means taken to control these diseases are governed by the *Prisoners' Detention Act, 1908*, by the regulations under the *Pure Food Act, 1908*, rendering the employment illegal of persons suffering from venereal disease in the manufacture, preparation, storage, packing, carriage or delivery of any food or drug and by the *Public Health*

Amendment Act, 1915, which imposes the duty on the proprietors of factories or businesses connected with the preparation or sale of food, of reporting to the Board of Health the fact or reasonable suspicion that an employee is suffering from a venereal disease.

The Prevention of Cancer.

The Director-General calls attention to the fact that 1,491 persons died in the State of New South Wales during the year 1916, of cancer. About 95% of these persons were over 35 years of age. He states that, notwithstanding a great deal of research, the cause of this terrible disease is still unknown. Early removal is the only known cure. The Department has therefore issued a poster, directing attention to the earliest manifestation which may indicate commencing cancer and to the importance of seeking early advice and treatment. It appears to us that this expedient is unlikely to have a marked effect in reducing mortality. It is impossible to indicate to an untrained observer the means of diagnosing a malignant growth. There is even some danger that nervous persons may be unnecessarily alarmed by instructions of this nature. If the members of the medical profession would endeavour to keep a better control of their patients, more especially when signs exist of early malignant disease, it is possible that some tangible results might accrue.

Tuberculosis.

In the campaign aiming at the eradication of tuberculosis, the Department endeavours to provide accommodation for patients in the various stages of the disease. The scheme includes sanatorium treatment for early infections and hospital accommodation for persons in an advanced stage of the disease. The report dealing with the year's experience at the Waterfall Sanatorium is the subject of a special report by its Medical Superintendent, Dr. H. W. Palmer. This report will be dealt with separately. The Director-General of Public Health points out that many patients are admitted to this institution in a hopelessly advanced stage and that in a minority of the cases, is the disease curable.

He recognizes that a sanatorium should be a training school in hygienic principles. In regard to the accommodation in the metropolitan district for persons suffering from advanced tubercular infections, it is pointed out that only 300 beds are available. The administrative work is therefore handicapped to a very considerable extent and the endeavour to cope with the infection is rendered nugatory, owing to the large number of persons disseminating it. The Director-General expresses the hope that financial conditions will permit some definite action being taken at an early date. The continued spread of tuberculosis leads to an unnecessary waste of enormous sums of money. Moreover, it should be brought to the notice of the State Treasurer that the allocation of a considerable sum of money for the purpose of combating this disease, must lead to very distinct economies in the near future and to a large saving after the course of a few years. It is useless playing with this question and it is not saying too much to state that no serious, organized attempt has yet been made to eradicate the disease in New South Wales.

It was pointed out that arrangements have been made with the South Australian Government for the treatment in sanatoria of persons from Broken Hill suffering from tuberculosis. It is stated that the arrangement is working satisfactorily.

Infective Diseases.

As the primary object of a Department of Public Health is the prevention of infective and other preventible diseases, it will be found easier to obtain a general idea of the nature and result of the year's work, if a summary of the records of notification be given in this place, although the chapter dealing with this subject does not appear until a later stage.

The notifiable diseases in New South Wales are enteric fever, scarlet fever, diphtheria, bubonic plague, acute poliomyelitis, malaria, epidemic cerebro-spinal meningitis and, in certain portions of the State, pulmonary tuberculosis. Leprosy and small-pox are also subject to compulsory notification. The records of the number of cases notified are given in tables. The municipalities, shires and police districts are dealt with separately and are grouped under three headings, *viz.*, Metropolitan Combined District, Hunter River Combined District and the "Remainder of the State." The total number of cases of enteric fever notified in 1917 was 1,091. Of these, 402 were in the Metropolitan Combined Sanitary District. Of the 1,091 persons affected by this disease, 103 died. This is equivalent to a case mortality of 9.44%. It will be noted that the population of New South Wales in the year 1917 was 1,886,501. In other words, 0.57‰ of the population were infected with a disease which has been proved in other parts of the world to be entirely preventible. The number of notifications of scarlet fever in the Metropolitan District was 1,218 and in the whole State 2,255. There were 27 deaths or a case mortality of 1.19%. The prevalence of diphtheria was appalling. There were 2,575 cases in the Metropolitan area, while the total for the State was 5,805. Assuming that the notifications represent the total number of cases occurring during the year—a daring assumption—the incidence of this preventible disease was 3.08‰. In the Metropolitan districts 1.181 cases of pulmonary tuberculosis were notified during the year. There were 60 notified in the Hunter River District and 78 in the Katoomba Municipality and Blue Mountains Shire. It is, of course, impossible to estimate the actual number of tubercular infections of the lungs arising or detected for the first time in the whole State during the course of the year. The complaint of the Director-General of the inadequacy of the provision of hospital accommodation for tuberculous patients in an advanced stage of disease is amply justified by the figures. Indeed, it would seem that 368 beds in the sanatorium is hopelessly insufficient, in view of the great prevalence of the disease. The total number of deaths from pulmonary tuberculosis in the areas in which it is notifiable, was 584. The case mortality is given at 44.31%. Too much reliance, however, should not be placed on these figures, firstly, because no correction can be made for the movements of the tubercular population and, secondly, because pulmonary tuberculosis is a very chronic disease and few of the 1,319 persons whose infections were notified during the year, would be included in the 584 persons who died.

The number of cases of epidemic cerebro-spinal meningitis notified during the year was 197. The disease appears to have been spread more or less regularly throughout the State, 62 of the notifications being in the Metropolitan district. There were 98 deaths, which is equivalent to a case mortality of 49.74%. There were 16 cases of poliomyelitis notified and 12 deaths. From these figures it is evident that medical practitioners have been remiss in reporting these cases. The total number of malarial infections notified in 1917 was 17. It would be interesting to know how many of the cases arose within the State and in how many the infection took place elsewhere. In 1915 no less than 105 cases were notified, although the obligation to notify this disease was first introduced on March 17, 1915. In the following year 61 cases were notified.

A special chapter of the report is devoted to the outbreak of mild small-pox in New South Wales from 1913-1917. Reference is made to the fact that full accounts of the epidemic have been published in previous reports. At no stage did the epidemic spread beyond the boundaries of the State, although the traffic between the contiguous States was unrestricted. During the course of the year 1917 no less than 117 persons were attacked. The total number of infections during the five years of the epidemic was 2,392. There were four deaths, but in each case death was attributed to some concomitant condition and "the utmost that could be said was that possibly small-pox was adjuvant to the fatal termination." Of the 119 cases, 105 occurred in the north-western districts, while fourteen occurred in the Newcastle district. The type of disease remained constant throughout the five years. In the more severe cases pitting was very marked, but in other respects the disease was apparently not more dangerous than varicella. Isolation and vaccination of contacts were the two measures employed in checking the spread of the conditions. These measures were successful in every district in which they were employed. The disease attacked persons between the ages of 20 and 30 most frequently, while in the second decennial period its prevalence was nearly as great. Males were affected more frequently than females and the disease appeared to spread more rapidly in the winter months than during the hot season.

(To be Continued.)

Public Health.

NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the nine weeks ending November 1, 1919:—

	Metropolitan Combined District. Cs.	Dths.	Hunter River Combined District. Cs.	Dths.	Rest of State. Cs.	Dths.	Total. Cs.	Dths.
Enteric Fever	69	5	2	0	23	1	94	6
Scarlatina	134	2	1	0	59	0	194	2
Diphtheria	202	4	24	1	190	4	416	9
*Pul. Tuberculosis	201	101	9	8	78	12	288	121
C'bro-Sp'l Menin.	7	3	1	1	1	0	9	5
Malaria	14	1	0	0	0	0	14	1

* Notifiable only in the Metropolitan and Hunter River Districts, and, since October 2, 1916, in the Blue Mountain Shire and Katoomba Municipality.

VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the nine weeks ending November 2, 1919.—

	Metropolitan. Cs.	Dths.	Rest of State. Cs.	Dths.	Total Cs.	Dths.
Enteric Fever	8	0	15	0	23	0
Scarlatina	222	2	168	1	390	3
Diphtheria	359	17	281	5	640	22
Pulmonary Tuberculosis	161	83	58	27	219	110
C'bro-Spinal Meningitis	3	1	1	0	4	1
Puerperal Fever	3	0	3	0	6	0

QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the nine weeks ending November 1, 1919:—

Diseases.	No. of Cases.
Enteric Fever	52
Scarlatina	34
Diphtheria	358
Pulmonary Tuberculosis	69
Poliomyelitis	2
Erysipelas	27
Anchylostomiasis	1
Puerperal Fever	2
Pneumonia	93
Influenza	4,245
Malaria	1
Cerebro-Spinal Meningitis	2

SOUTH AUSTRALIA.

The following notifications have been received by the Central Board of Health, Adelaide, during the ten weeks ending November 1, 1919:—

	Adelaide. Cs.	Dths.	Rest of State. Cs.	Dths.	Total. Cs.	Dths.
Enteric Fever	0	0	3	0	3	0
Scarlatina	17	1	170	0	187	1
Diphtheria	17	4	172	4	189	8
Pulmonary Tuberculosis	9	15	56	46	65	61
Erysipelas	1	0	15	1	16	1
Morbilli	111	1	753	3	864	4
Pertussis	2	0	78	0	80	0
C'bro-Spinal Meningitis	0	0	3	2	3	2
Puerperal Fever	0	1	1	0	1	0
Influenza	95	28	1913	92	2008	120

WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, during the twelve weeks ending November 1, 1919:—

	Metropolitan. Cases.	Rest of State. Cases.	Total. Cases.
Enteric Fever	0	8	8
Scarlatina	62	27	89
Diphtheria	91	33	124
Pulmonary Tuberculosis	55	37	82
Malaria	275	31[1]	306
Beri-beri	0	10	10
Erysipelas	5	1	6
Ophthalmia Neonatorum	1	0	1
Dengue Fever	0	112[2]	112
Influenza	2007	1764	3771
Bilharziosis	1	0	1

[1] The number of cases of malaria notified in Wyndham during May, June, July, August and September was 32.
[2] The number of cases of dengue notified in Wyndham during May, June, July, August and September was 123.

TASMANIA.

The following notifications have been received by the Department of Public Health, Tasmania, during the nine weeks ending November 1, 1919:—

Diseases.	Hobart. Cases.	Launceston. Cases.	Country. Cases.	Whole State. Cases.
Enteric Fever	2	1	7	10
Scarlatina	0	5	0	5
Diphtheria	17	21	67	105
Pulmonary Tuberculosis	12	6	14	32
Ophthalmia Neonatorum	1	1	1	3
Puerperal Fever	0	0	1	1
Influenza	139	48	126	313[1]
Eucephalitis Lethargica	0	0	1	1

[1] According to the monthly returns there were 421 cases of influenza notified during the months of September and October in the whole State.

We learn that a Mr. Falconer has been commissioned by the friendly societies, medical institutes and dispensaries of Victoria to engage the services of a number of medical practitioners in England, to work for the Victorian friendly societies.

A special election of two members of the Senate of the University of Western Australia by convocation will be held on January 16, 1920. The nominations may be sent to the Warden of Convocation not later 28 days nor more than 42 days before the date of the election.

THE THOMAS WALKER CONVALESCENT HOSPITAL.

Twenty-six years ago a Convalescent Home was established on the Parramatta River in New South Wales under the name of the Thomas Walker Convalescent Hospital. Since that time 23,137 convalescent patients have been housed in the institution and, in the same period, there have been 23 deaths. In the annual report for the year ended September 30, 1919, it is stated that for a time the home was handed over to the control of the Government during the influenza epidemic. Two hundred and four patients were admitted and, of these, 32 died. Since the waning of the epidemic, it has been found that the admissions to the home from the general hospitals have fallen off. The Committee determined to lend the home to the Red Cross Society. From May 20 to August 31, 1919, 737 convalescents were admitted under the Red Cross Society. The report of the visiting medical officers is brief and contains no information of the medical work conducted during the year. An appendix, however, is published, setting forth the diseases from which the patients suffered. It is difficult to understand the use of the term "cured" in these tables, in view of the fact that the institution is a convalescent home. It is obvious that the list has not been controlled by the medical officers, since the number of mutilated technical terms is very considerable. Moreover, diseases and operations are mixed indiscriminately.

Obituary.

HARRY HUNTER GRIFFITH.

A few months ago it was our melancholy duty to announce the death of Major H. Hunter Griffith, whose name has a place on the ever-honourable roll of medical men who nobly sacrificed everything, even life itself, for their country's cause.

Harry Hunter Griffith was born at Woodstock, Albury, New South Wales, on August 28, 1887. He was the son of Mr. Charles L. Griffith, of "Myoora," Toorak, and Tyrie Station, Dandaloo, New South Wales.

Educated first at the Albury High School, he later enrolled at the Church of England Grammar School, Geelong. For the period of his medical course at the Melbourne University he was a resident student of Trinity College and graduated as M.B., B.S. in 1915. The exigencies of the time and his keen sense of duty allowed Harry Hunter Griffith no opportunity for civil practice, with the exception of a short period at St. Vincent's Hospital, Melbourne, following upon which he volunteered for active service. After being stationed for a time at Langwarrin Camp, Victoria, and later at Lytton Camp, Queensland, he was given opportunity to go abroad. His death at No. 3 Australian General Hospital, Wandsworth, England, on March 23, 1919, carried an added poignancy to his relatives and friends, in that he survived the risks and dangers incidental to military service, only to fall a victim to the then prevailing scourge, influenza.

Harry Hunter Griffith was the third of three brothers to die within a short period. Gerald Thomas Griffith, rejected for military service, was accidentally killed on the railway line at Albury, New South Wales, on November 20, 1915; another brother, Geoffrey Carmichael Griffith, died of wounds received at Pozières on August 9, 1916.

Such a heavy bereavement will excite the spontaneous sympathy of all the members of our profession for the family and friends of the deceased officer.

Harry Hunter Griffith was a brilliant tennis player and represented his College and University from 1908 to 1913; he had also a long list of tournament successes to his credit. Bright and cheerful in disposition, he was very popular as a student and his early decease precluded him from following the profession of his choice.

Correspondence.

TREATMENT OF PULMONARY ŒDEMA.

Sir,—With reference to the interesting letter on this subject by Dr. Jas. Booth, in your issue of 15th inst., I would like to state that during the late influenza epidemic I also used atropine hypodermically in cases of the above nature and, though it would be unjustifiable to argue any causal relationship without (in my cases, at least) further and more complete investigation, I think that the effects of such medication warrant a careful enquiry.

In cases showing a commencing generalized pulmonary œdema, I was in the habit of prescribing an initial hypodermic dose of atropine sulphate (1.2 mg.), followed by injection of 0.6 mg. of the same drug at intervals of four hours.

In an unselected series of 12 cases of the above nature, six were treated by the atropine method, the remaining six remaining as controls without this drug. Of the former six all patients recovered, the respiratory distress generally being relieved after the second dose, and of the latter, three died, apparently purely as the result of a gradually increasing œdema of the lungs.

Of the former series, three were aborigines (rather bad subjects in my experience) and, of the latter, two were of the same race, both of whom died. It is, however, only fair to add that one patient who recovered and who was being treated with atropine, began to show signs of cardiac dilatation, probably giving rise to a passive pulmonary congestion. For this case I performed venesection, removing 390 c.cm. of blood, with rapid relief of distress, followed by gradual improvement of the pulmonary and cardiac conditions, the patient still being treated with atropine.

Yours, etc.,

GEORGE HAY.

"Oakleight,"
Peak Hill, New South Wales,
November 16, 1919.

HYGIENE IN THE BARBER'S SHOP.

Sir,—Has our profession ever realized the present method of shaving from a health point of view, when the hands of the barber are used after the preliminary lather?

At present in this city, everything is done towards cleanliness, towels, water, razors, etc., so satifactory, but the whole system breaks down when the shaver, as a rule, rubs in heavily the soap after lathering. Why does a customer have his own mug and brush, etc.? But all is useless when the barber uses his own hands to rub the soap, how ever he may wash them.

In the profession we realize how hard it is to clean our hands, hence the use of rubber gloves.

As I have seen a hard sore on the face with secondary rash and a positive Wassermann reaction, the result of using a borrowed razor, it makes one realize the chance of infection in so many ways. I send this memo to open the question for using anything but sterilized material for shaving; otherwise the methods at present in vogue are excellent.

My contention is that clean as they are, their methods will not be uniform until the present hand rubbing is cut out.

Yours, etc.,

HUGH T. S. BELL, F.R.C.S.

100 Ben Boyd Road,
Neutral Bay, Sydney,
November 20, 1919.

GOVERNMENT MEDICAL OFFICERS.

Sir,—In your issue of the 8th inst. I notice that at a recent Committee Meeting of Returned Medical Officers of New South Wales, the following opinion was arrived at, *viz.*, "That in cases where the appointment was held prior to August, 1914, no change should be asked for. All appointments since that time, if not made to returned medical officers, should be subject to revision. In all new appointments preference was to be given to returned medical officers."

Does this mean that in the opinion of the Committee all Government medical officers appointed since August, 1914, should be dismissed from their positions in order to provide returned medical officers with appointments?

We are all anxious to see the returned medical officers suitably rewarded, but as the service was a public one and for the public benefit, surely the expense of the reward should be borne by the public. It would be well if Drs. Poate and Wassell will explain why the Committee are of opinion that such reward should be made at the expense of the senior members of the profession who are to be dismissed from their positions through no fault of their own. It would also be interesting to learn why Government medical officers appointed before August, 1914, are to be spared when all others are sacrificed.

Yours, etc.,

PATRICK BLACKALL.

Queanbeyan, New South Wales,
November 20, 1919.

Proceedings of the Australian Medical Boards

VICTORIA.

The undermentioned have been registered, under Part 1 of the *Medical Act, 1915*, as duly qualified medical practitioners:—

Giblin, Arthur Leslie, c/o. Union Bank, Chapel Street, Prahran, L.R.C.P. *et* S. Edin.; L.R.F.P.S., Glas., 1916.

Finn, Charles Napier, 20 Mary Street, St. Kilda, M.B. *et* Ch.B., Edin., 1905.

Le Souef, Albert Wadeson, Parkville, Melbourne, M.B. *et* Ch.B., Melb., 1916.

Medical Appointments.

During the absence on leave of Dr. C. G. Godfrey (B.M.A.), Dr. J. Kellerman Adey (B.M.A.) has been appointed Acting Medical Superintendent of the Hospital for the Insane, Royal Park, and the Receiving House, Royal Park, Victoria.

Dr. Clive Shields (B.M.A.) has been appointed a Public Vaccinator for the Midland District and Dr. E. Rogerson (B.M.A.) for the North-Western District, Victoria.

The appointment of Dr. John Mackenzie (B.M.A.) as Government Medical Officer at Glen Innes, New South Wales, has been announced in the *Government Gazette*. Dr. Mackenzie obtained a commission as Captain in the Australian Army Medical Corps Reserve in November, 1916; in July, 1917, he was transferred to the Australian Military Forces, Army Medical Corps, and was appointed Medical Officer to a training area.

Dr. E. C. Pope (B.M.A.) has been appointed Medical Officer of Health to the Katanning District Road Board, Western Australia.

The appointment of Dr. H. M. J. Halloran (B.M.A.) as Officer of Health to the East Torrens County Board of Health, South Australia, is announced.

In pursuance of the provisions of *The Health Acts, 1900 to 1917*, Dr. James Warne has been appointed Medical Officer for Venereal Clinics, Brisbane.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xxiii.

Queenstown Hospital Union, Mount Lyell, Tasmania: Medical Officer.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Friendly Society Lodges, Institutes, Medical Dispensaries and other Contract Practice. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Australian Natives' Association. Brisbane United Friendly Society Institute. Cloncurry Hospital.
TASMANIA. (Hon. Sec., Macquarie Street, Hobart.)	Medical Officers in all State-aided Hospitals in Tasmania.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIA. (Hon. Sec., 6 Bank of New South Wales Chambers, St. George's Terrace, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United Friendly Societies' Dispensary. Canterbury United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Friendly Society Lodges at Lithgow. Friendly Society Lodges at Parramatta, Auburn and Lidcombe. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. Newcastle Collieries—Killingworth, Seaham Nos. 1 and 2, West Wallsend. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society..
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

Dec. 2.—N.S.W. Branch, B.M.A., Ethics Committee.
Dec. 2.—Tas. Branch, B.M.A., Branch and Council.
Dec. 2.—Ballot papers returned to Victorian Branch for election of office-bearers of Branch.
Dec. 3.—Vic. Branch, B.M.A., Annual General Meeting; announcement of election of office-bearers.
Dec. 5.—Q. Branch, B.M.A..
Dec. 5.—N.S.W. Branch, B.M.A., Extraordinary.
Dec. 5.—Eastern District Med. Assoc. (Taree, N.S.W.).
Dec. 9.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Dec. 11.—Vic. Branch, B.M.A., Council.
Dec. 12.—N.S.W. Branch, B.M.A..
Dec. 12.—S. Aust. Branch, B.M.A., Council.
Dec. 12.—Q. Branch, B.M.A., Council.
Dec. 16.—Tas. Branch, B.M.A., Branch and Council.
Dec. 16.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.
Dec. 26.—Q. Branch, B.M.A., Council.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney.